SP 10/043065

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:

Leonard Forbes

Examiner:

Kiesha L Rose

Serial No.:

10/043,065

Group Art Unit:

2822

Filed:

January 09, 2002

Docket:

303.684US3

Title:

P-CHANNEL DYNAMIC FLASH MEMORY CELLS WITH ULTRATHIN

**TUNNEL OXIDES** 

## INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

In compliance with the duty imposed by 37 C.F.R. § 1.56, and in accordance with 37 C.F.R. §§ 1.97 *et. seq.*, the enclosed materials are brought to the attention of the Examiner for consideration in connection with the above-identified patent application. Applicant respectfully requests that this Information Disclosure Statement be entered and the documents listed on the attached Form 1449 be considered by the Examiner and made of record. Pursuant to the provisions of MPEP 609, Applicant requests that a copy of the 1449 form, initialed as being considered by the Examiner, be returned to the Applicant with the next official communication.

Pursuant to 37 C.F.R. §1.97(b), it is believed that no fee or statement is required with the Information Disclosure Statement. However, if an Office Action on the merits has been mailed, the Commissioner is hereby authorized to charge the required fees to Deposit Account No. 19-0743 in order to have this Information Disclosure Statement considered.

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Serial No :10/043065

Filing Date: January 09, 2002

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The Examiner is invited to contact the Applicant's Representative at the below-listed telephone number if there are any questions regarding this communication.

Respectfully submitted,

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<u>CERTIFICATE UNDER 37 CFR 1.8:</u> The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this <u>15</u> day of March, 2004.

Name

Signature

PTO/SB/08A(10-01)
Approved for use through 10/31/202, OMB 651-0031
US Patent & Trademark Office: U.S. DEPARTMENT OF COMMERCE
er the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number. Substitute for form 1449A/PTO Complete if Known INFORMATION DISCLOSURE 10/043065 **Application Number** STATEMENT BY APPLICANT (Use as many sheets as necessary) **Filing Date** January 9, 2002 Forbes, Leonard **First Named Inventor Group Art Unit** 2822 MAR 1 7 2004 **Examiner Name** Rose, Kiesha Attorney Docket No: 303.684US3 A MADEING Sheet 1 of 2

100	US PATENT DOCUMENTS						
Examiner Initial *	USP Document Number	Publication Date	Name of Patentee or Applicant of cited Document	Class	Subclass	Filing Date If Appropriate	
	US- 2002/0016081 A1	02/07/2002	Aloni, E. , et al.	438	714	10/15/2001	
	US- 2003/0001197	01/02/2003	Chang, Y., et al.	257	315	08/30/2002	
	US- 2003/0201491	10/30/2003	Chung, B.	257	324	05/08/2003	
	US-5,408,115	04/18/1995	Chang, K.	257	324	04/04/1994	
	US-5,852,306	12/22/1998	Forbes, Leonard	257	315	01/29/1997	
	US-5,959,896	09/28/1999	Forbes, L.	365	185.33	02/27/1998	
	US-5,989,958	11/23/1999	Forbes, Leonard	438	257	08/20/1998	
	US-6,100,559	08/08/2000	Park,	257	315	08/14/1998	
	US-6,222,224	04/24/2001	Shigyo, N.	257	315	12/19/1997	
	US-6,245,613	06/12/2001	Hsu, , et al.			04/24/2000	
	US-6,246,089	06/12/2001	Lin, Yai-Fen , et al.	257	315	03/13/2000	
	US-6,265,266	07/24/2001	Dejenfelt, A. T., et al.	438	258	09/27/1996	
	US-6,316,316	11/13/2001	Wu, S.	438	260	06/18/1999	
	US-6,351,428	02/26/2002	Forbes, Leonard	365	230.06	02/29/2000	
	US-6,383,939	05/07/2002	Yang, W., et al.	438	706	08/17/1999	
	US-6,515,328	02/04/2003	Yang, W., et al.	257	315	02/04/1999	
	US-6,583,011	06/24/2003	Xia, L., et al.	438	275	01/11/2000	

FOREIGN PATENT DOCUMENTS							
Examiner Initials*	Foreign Document No	Publication Date	Name of Patentee or Applicant of cited Document	Class	Subclass	T <sup>2</sup>	

	OTHE	R DOCUMENTS NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
		CHAU, R., et al., "30nm Physical Gate Length CMOS Tansistors with 1.0 ps n-MOS and 1.7 ps p-MOS Gate Delays", <u>IEEE Int. Electron, Devices Meeting, San Francisco</u> , (December, 2000),pp. 45-48	
		FRANK, J., et al., "Monte Carlo Simulations of p- and n-Channel Dual-Gate Si MOSFET's at the Limits of Scaling", <u>IEEE Transactions on Electron Devices</u> , 40(11), (November 1993),pg. 2103	
		HIRAYAMA, M., et al., "Low-Temperature Growth of High-Integrity Silicon Oxide Films by Oxygen Radical Generated in High-Density Krypton Plasma", <u>IEEE</u> , (1999),4 pages	
		ILYAS, M., et al., "The optical absorption edge of amorphous thin films of silicon monoxide and of silicon monoxide mixed with titanium monoxide", IEE, (2001),1	

**EXAMINER** 

**DATE CONSIDERED** 

PTO/SB/08A(10-01)
Approved for use through 10/3/1/2002, 20MB 651-0031
US Patient & Trademan's Office U.S. DEPARTMENT OF COMMERCE
or the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number. Substitute for form 1449A/PTO Complete if Known INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many species as necessary) **Application Number** 10/043065 **Filing Date** January 9, 2002 **First Named Inventor** Forbes, Leonard MAR 1 7 2004 **Group Art Unit** 2822 Sheet 2 of 2 PACE TRACE **Examiner Name** Rose, Kiesha Attorney Docket No: 303.684US3

	OTHER	R DOCUMENTS NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
		page	
		MULLER, D. A., "The Electronic Structure at the Atomic Scale of Ultrathin Gate Oxides", Nature, 399, (June 1999),758-761	
		OHGURO, T., "Tenth Micron P-MOSFET's with Ultra-Thin Epitaxial Channel Layer Grown by Ultra-High-Vacuum CVD", <u>Proceedings: International Electron</u> <u>Devices Meeting, IEEE, Washington, Dec. 5-8, 1993, (Dec. 5, 1993), pp. 433-436</u>	
		STRASS, A., et al., "Fabrication and Characterisation of thin low-temperature MBE-compatible silicon oxides of different stoichiometry", <u>Thin Solid Films 349</u> , (1999),pp. 135-146	
		TIWARI, SANDIP, "Volatile and Non-Volatile Memories in Silicon with Nano-Crystal Storage", Int'l Electron Devices Meeting: Technical Digest, Washington, DC,(Dec. 1995),521-524	